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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,447	01/19/2005	Rex E. Blakeman	71486-0087	8660
20915	7590	05/02/2007		
MCGARRY BAIR PC 32 Market Ave. SW SUITE 500 GRAND RAPIDS, MI 49503			EXAMINER MCNAULL, ALINE D	
			ART UNIT 2872	PAPER NUMBER
			MAIL DATE 05/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,447	Applicant(s) BLAKEMAN ET AL.	
	Examiner Aline D. McNaull	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 2/16/2007 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, specific columns have been cited to cite where in the reference Examiner has found motivation to combine the references.

Regarding Applicant's arguments of the shape of the snap fit connector. Examiner has taken columnar to mean any type of column not just cylindrical ones. Columnar has been broadly interpreted to mean not only cylindrical columns but rectangular columns as well. Evidence of the fact that columns can be rectangular can be found on the internet. For example the website: <http://www.square-columns.com/square-columns.html>.

Claim Objections

Claims 37 and 2-10 is objected to because of the following informalities:

The phrase "In a vehicular mirror assembly" should be replaced with --A vehicular mirror assembly--. Claims 2-10 depend on Claim 37 and hence inherit the deficiencies of Claim 37.

Claim 4 is further objected to because the phrase "with the to the" in line 2 should be --with the-- or --to the--. Claims 5-9 depend on Claim 4 and hence inherit the deficiencies of Claim 4.

Claim 10 is further objected to since "an" in line 4 should be --and--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 37, and 2-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 37, it is unclear what is being connected together by the connector. It appears that Applicant is attempting to claim ^{two}~~two~~ distinct connections and accordingly the scope of the claim is unclear. For purposes of examination Examiner

2/29/07

has taken the connector to be joining the mounting frame to the mirror shell or the tilt actuator to the mounting frame. Claims 2-10 depend on Claim 37 and hence inherit the deficiencies of Claim 37.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 37, 2-4, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishigami et al., United States Patent No US 6,712,329 B2.

Regarding Claim 37, Ishigami discloses a vehicular mirror assembly comprising: a mounting frame adapted to be coupled to a vehicle (see abstract); a mirror shell mounted to the mounting frame and comprising a rearwardly-facing opening (see item 136 in Figure 14); a reflective element mounted within the mirror shell in register with the rearwardly facing opening (see item 112 in Figure 14); a tilt actuator mounted to at least one of the mirror shell and the mounting frame, and to the reflective element for tiltably actuating the reflective element (see item 116 in Figure 14); and at least one connector joining at least one of (1) the mounting frame and the mirror shell, and (2) the tilt actuator and the mounting frame (see item 146 in Figure 14); wherein the connector

comprises a columnar snap-fit connection which securely retains the at least one of (1) the mounting frame to the mirror shell, and (2) the tilt actuator to the at least one of the mounting frame to the mirror shell (see item 146 in Figure 14 wherein the anchor piece is columnar in that it is rectangularly columnar).

Regarding Claim 2, Ishigami discloses a vehicular mirror assembly wherein the mounting further comprises an aperture on at least one of the mounting frame, the mirror shell and the tilt actuator (see item 40 in Figure 1) and a stud on at least one of the mounting frame, the mirror shell and the tilt actuator wherein the stud is adapted to be snap-fit within the aperture to securely mount the stud within the aperture (see item 50 in Figure 1 wherein the stud passes through item 24 and 40 in a snap-fit manner).

Regarding Claim 3, Ishigami discloses a vehicular mirror assembly wherein the stud comprises a first portion having a first diameter and a second portion having a second diameter smaller than the first diameter, the second portion adapted for snap fit communication with the aperture (see item 50 in Figure 1 wherein the top portion has a larger diameter than the bottom portion).

Regarding Claim 4, Ishigami discloses a vehicular mirror assembly wherein the stud is integrally formed to the at least one of the mounting frame, the mirror shell and the tilt actuators (see item 50 in Figure 1).

Regarding Claim 10, Ishigami discloses a vehicular mirror assembly wherein at least one of the mounting frame, the mirror shell, and the tilt actuator is made from a material selected from the group consisting of: glass filled nylon, acetal, polyester, and ABS plastic (see column 8, lines 50-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-8, and 16-19, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigami et al. (US 6,712,329 B2) in view of Weaver, United States Patent No. 5,604,645, hereinafter Weaver.

Regarding Claims 5 and 29, Ishigami discloses the invention as set forth above however lacks teaching the specifics regarding the angles and shape of the mounting studs.

Weaver teaches a mounting stud comprising a bulb end, the neck portion having a diameter smaller than the diameter of the bulb end (see item 40 in Figure 4).

It would have been obvious to one having ordinary skill in the art at the time of invention by Applicant, to modify Ishigami's mounting studs to include the specific angles taught by Weaver. The motivation for doing this would have been to provide an optimal snap fit connection as suggested by Weaver (see column 2).

Regarding Claims 6-8 and 16-19 and 30-32, Ishigami discloses the invention as set forth above, however lacks teaching the specifics wherein the bulb end comprises an annular face having an approximately 45 degree bevel, wherein the neck portion

comprises a truncated cone inclined approximately 10 degrees, and wherein the aperture comprises a wall inclined approximately 10 degrees.

Weaver teaches wherein the second portion of the mounting stud comprises a neck portion (see portion below taper 44) and a bulb end (see item 40 in Figure 4) the neck end having a smaller diameter than the diameter of the bulb end. Weaver further teaches wherein the bulb end comprises an annular face (see item 42 in Figure 4) having approximately a 45 degree bevel (see column 4, line 15). Weaver also teaches wherein the neck portion comprises a truncated cone inclined approximately 10 degrees (see column 4, line 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the specific angles and shapes taught by Weaver, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. One would have been motivated to provide the angles of the bulb end for purpose of creating a secure snap fit connection in order to help guide the insertion of the stud into the aperture, thus providing easier assembly of the components as suggested by Ishigami (see column 2). *In re Antonie*, 559 F. 2d 618, 195 USPQ 6 (CCPA 1977).

Claims 11-15 and 21-28 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigami (US 6,712,329 B2).

Regarding Claim 11, Ishigami discloses a snap fit assembly for interconnecting selected components of a vehicular mirror assembly, the components comprising a

mirror housing (see item 136 in Figure 14), a mounting frame having at least one of a first mounting aperture (see items 24 and 26), and a tilt actuator assembly having at least one of a second mounting aperture (see item 116 in Figure 14), the snap-fit assembly comprising: at least one of a first mounting stud comprising a first portion having a first diameter and a second portion having a second diameter smaller than the first diameter (see item 146 in Figure 14), the second portion adapted for snap fit communication with the at least one of the first mounting aperture and the first portion adapted for supporting communication with the mounting frame (see item 146 in Figure 14).

Ishigami is silent on how the tilt actuator is mounted and thus lacks specific mention of second mounting studs and apertures.

At the time of invention, it would have been obvious to one of ordinary skill in the art to use an integrally and rigidly attached snap fit mounting stud to mount the tilt actuator to the mounting frame in the Ishigami mirror. The motivation for doing this would have been to provide lower costs or easier assembly work as is suggested by Ishigami (column 2, line 6).

Regarding Claims 12, 14, 25 and 27, Ishigami discloses a first portion of the first mirror mounting stud that is rigidly attached to the mirror housing (see item 146).

Regarding Claims 13, 15, 26, and 28, Ishigami discloses wherein at least one of a second mounting stud is integrally attached to the mounting frame (see item 50 in Figure 1).

Regarding Claims 21-23 and 34-36, Ishigami discloses parts of the mirror to be made of ABS plastic but lacks specific mention of the mounting bracket comprising glass-filled nylon, or polyester, or the housing to comprise acetal or injection molding. However these materials are very well known in the art. At the time of invention, it would have been obvious to one of ordinary skill in the art to form mirrors out of the following materials: glass-filled nylon, acetal, polyester, or injection molding. The motivation for doing this would have been to reduce manufacturing costs as suggested by Ishigami (see column 2, line 5).

Regarding Claim 24, Ishigami discloses a vehicular mirror assembly comprising: a mirror housing adapted to enclose a mounting frame and a tilt actuator assembly; and having at least one of a first mounting stud (see item 50 in Figure 14); the mounting frame enclosed within the mirror housing having at least one of a first mounting aperture and at least one of a second mounting aperture (see Figure 1); and wherein the at least one of a first mounting stud comprising a first portion having a first diameter and a second portion having a second diameter smaller than a first portion having a first diameter and a second portion having a second diameter smaller than the first diameter, the second portion adapted for snap fit communication with the at least one of the first mounting aperture and the first portion adapted for supporting communication with the mounting frame (see Figure 1).

Ishigami is silent on how the tilt actuator is specifically mounted and thus lacks specific mention of second mounting studs and apertures. However snap fit mounting studs are well known within the art as is evident by Ishigami. At the time of invention, it

would have been obvious to have at least one of a second mounting stud adapted for snap fit communication with the at least one of the second mounting aperture and the first portion adapted for supporting communication with the tilt actuator assembly. The motivation for doing this would have been to provide lower costs or easier assembly work as suggested by Ishigami (column 2, line 6).

Claims 9, 20, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigami (US 6,712,329) in view of Mertens, United States Patent No. 6,488,382 B1, hereinafter Mertens.

Ishigami discloses the mirror assembly as set forth above except lacks teaching a bore extending coaxially through a stud.

Mertens teaches a vehicular mirror assembly wherein the stud comprises a bore extending coaxially therethrough (see Figure 4).

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the studs of Ishigami to include the bore hole as taught by Mertens. The motivation for doing this would have been to allow a spring to be inserted in the hole to provide elastic tension in the connection as is suggested by Mertens (see column 2, lines 53-54).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

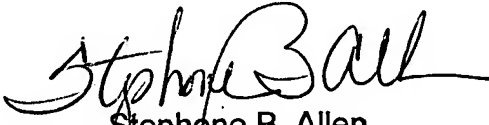
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aline D. McNaul whose telephone number is 571-272-8043. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ADM
ADM
4/27/2007


Stephone B. Allen
Supervisory Patent Examiner